

REMARKS

Reconsideration is respectfully requested.

Status of the Claims

Claims 1-3 are pending in this application. Claims 1-3 stand rejected.

Claims 1 and 2 are amended, and new claims 4 and 5 are added. No new matter is introduced. Support for the amendments may be found, for example, with reference to Applicants' specification at page 12, line 9 through page 17, line 26, and with particular reference to Applicants' FIGs. 5, 7 and 8.

Objection to Drawings

The drawings are objected to. Specifically, the Examiner finds that FIGs. 1 and 2A are not fully legible. Applicants submit replacement drawing sheets for FIGs. 1, 2A and 2B, in which point switching device 4 has been redrawn to eliminate shading that may previously have obscured some illustrated features of point switching device 4. Applicants respectfully request that the replacement drawing sheets be accepted, and that the objection to the drawings be withdrawn.

Rejection Under 35 U.S.C. §102(b)

Claims 1 and 3 are rejected under 35 U.S.C. §102(b) as being anticipated by Gill (U.S. Patent No. 1,548,940). Applicants amend independent claim 1 to further clarify the nature of their invention, and respectfully traverse the rejection.

In amended independent claim 1, Applicants claim:

1. A point switching device that is provided at a diverging point on tracks on which a movable body travels, comprising:

a point adapted to move between a first position and a second position by rotating about a support point on one end thereof;

a first coil for generating an induction field to drive the point to the first position;

a second coil for generating an induction field to drive the point to the second position; and

an excitation control unit operable for selecting one of the first coil or the second coil and for supplying an intermittent exciting current to the selected coil for driving the point to the first position or the second position, respectively, wherein:

the excitation control unit operates to continue to supply the intermittent exciting current to the selected coil until the other one of the first coil or the second coil is selected.

(Emphasis added).

Gill discloses a railroad track switch having switch tongues 21, 22 that are adapted to move between first and second positions in response to signals applied to first and second coils 37, 38. Gill further discloses a switch box 42 that controls currents supplied to the first and second coils 37, 38 to move the fork member 20 between the first and second positions. In sharp contrast to Applicants' invention as claimed in amended independent claim 1, however, Gill fails to disclose that the switch box 42 is configured to supply an intermittent exciting current to a selected one of the coils 37, 38 until the other one of the coils 37, 38 is selected.

This claimed feature of Applicants' amended independent claim 1 is significant because it enables the claimed point switching device to accommodate and pass a movable body (i.e., train) that is proceeding in a direction of travel that does not require switching (i.e., opposite to the direction X of FIG. 10A) regardless of the current position of the point. This feature works as follows.

According to the feature as claimed, an intermittent exciting current is supplied to a selected one of the first coil or the second coil, and continues to be supplied to the selected coil until the other coil is selected. Two states are provided by the intermittent exciting current: one is a state in which the position of the point is held, and the other is a state in which the position of the point is not held. As a result, when the movable body comes to the point area from a direction closed by the

point in its current position (hereinafter “the movable body coming from the opposite direction”), as facilitated by the intermittent exciting current, the point becomes movable by the movable body so that the movable body is allowed to go to through the point area (see, e.g., Applicants’ FIGs. 10A, 10B). After the point is moved by the movable body coming from the opposite direction and the movable body passes through the point, when the intermittent exciting current is supplied again to the selected coil, the point returns to its prior position. In this manner, Applicants’ claimed point positioning device is able to effectively maintain the current position of the point after passing the movable body coming from the opposite direction without experiencing a derailment of the movable body.

Gill’s switch box 42 is configured so that current is supplied to one of the coils 37, 38 only momentarily (see, e.g., page 2, lines 44-50 of Gill)”:

Each of the faces 46 is provided with a resilient cushion 52 of rubber or other suitable resilient material so that when a given lever 49...the cushion 52 acts to restore the lever and quickly break the contact.

Accordingly, the cushion 52 is configured so that after the lever 49 contacts the contact 47, 47’, the lever 49 leaves the contact 47, 47’. Thereby, after the point moves, the current is not supplied to the coils 37, 38. Accordingly, in the device disclosed by Gill and in sharp contrast to Applicants’ claimed switching device, if the movable body comes to the point area of Gill’s device from the opposite direction, the point can be moved by the movable body, but the moved point will not return to the prior position after passing the movable body.

Hussein, which discloses a switching arrangement for model trains that is switched based on a randomly placed contact on the track, fails to make up for this deficiency of Gill.

Accordingly, Applicants respectfully submit that amended independent claim 1 is neither anticipated nor made obvious by any combination of the cited references, and stands in condition for allowance. As claim 3 depends from allowable independent claim 1, Applicants further submit that dependent claim 3 is also allowable for at least this reason.

Therefore, Applicants respectfully request that the rejection of claims 1 and 3 under 35 U.S.C. §102(b) be withdrawn.

Rejection Under 35 U.S.C. §103(a)

Claim 2 is rejected under 35 U.S.C. §103(a) as being unpatentable over Gill (U.S. Patent No. 1,548,940) in view of Hussein (U.S. Patent No. 4,223,847). Applicants amended claim 2 to further clarify the nature of their invention, and respectfully traverse this rejection.

For at least the reasons presented in the previous section above, Applicants argued that amended independent claim 1 is not made obvious by the combination of Gill and Hussein, and is allowable. Amended claim 2 depends from allowable independent claim 1. Accordingly, Applicants respectfully submit that amended dependent claim 2 is also allowable for at least this reason.

Therefore, Applicants respectfully request that the rejection of claims 2 under 35 U.S.C. §103(a) be withdrawn.

New Claims

New claims 4 and 5 are added. As each of new claims 4 and 5 depends either directly or indirectly from allowable independent claim 1, Applicants respectfully submit that new claims 4 and 5 are also allowable for at least this reason.

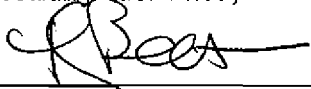
Conclusion

In view of the above amendments, Applicants believe the pending application is in condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

The Examiner is respectfully requested to contact the undersigned at the telephone number indicated below if the Examiner believes any issue can be resolved through either a Supplemental Response or an Examiner's Amendment.

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Respectfully submitted,

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